

**École Secondaire LAURIER MACDONALD High School**

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**COURSE STANDARDS AND PROCEDURES**

**COURSE**:

*Mathematics 504 Secondary 5 Math CST*

**CLASS RESOURCES:** *Math 3000 workbook, Teacher notes, in class handouts, Math Help Service, Google Classroom*

**COURSE DESCRIPTION**:

Secondary 5 Math CST  
  
**MYP AIMS ADDRESSED BY THE COURSE**: What are the aims/objectives of the course? How do these relate to the MEES competencies?

| MYP Course Aims | MEES Course Objectives |
| --- | --- |
| * Knowing and Understanding * Investigating patterns * Communicating * Applying mathematics in real life contexts | **TERM 1**  **Chapter 1 - Systems of Equations and Inequalities**   * Solving systems of equations * Inequalities in 1st degree with two variables * System of inequalities * Polygon of constraints * The optimizing function * Optimal solutions * linear programming and optimal solutions * Solving an optimization problem |
| * Knowing and Understanding * Investigating patterns * Communicating * Applying mathematics in real life contexts | **TERM 2**  **Chapter 2 - Financial mathematics**   * Exponential notation * Laws of exponents * Logarithm (definition and change of base) * Interest rates * Interest period * Discounting * Compounding |
| * Knowing and Understanding * Investigating patterns * Communicating * Applying mathematics in real life contexts | **TERM 3**  **Chapter 3 - Graphs**   * Tree diagrams and networks * Graph * Connected graph * Complete graph * Path * Circuit * Tree * Directed graph * Weighted graph * Path of minimum value * Path of maximum value * Tree of minimum value * Chromatic number * Critical Path   **Chapter 4: Social theory - Voting Procedures**   * Voting Procedures * Majority rule and plurality voting * Borda count, condorcet method, elimination method and approval voting * Majority election |

**FUNDAMENTAL IB CONCEPTS**: Identify the MYP fundamental concepts (communication, intercultural awareness and holistic learning) specific to the subject and explain how they will be incorporated.

* Concepts: Form, Relationships, Logic
* How: Providing concrete examples

**KEY INSTRUCTIONAL STRATEGIES/APPROACHES TO LEARNING**: Which ATLs will be addressed in the course and how? How will the content be delivered to the students?

Which ATLs will be addressed in the course and how?

Thinking skills

* Analyzing and evaluating issues and ideas
* Practice observing carefully in order to recognize problems
* Gather and organize relevant information to formulate an argument
* Practice visible thinking strategies and techniques
* Utilizing skills and knowledge in multiple contexts
* Apply skills and knowledge in unfamiliar situations
* Transfer current knowledge to learning of new technologies

How will the content be delivered to the students?

* Homework quizzes allow students to reflect on previous classes concepts and learning experiences.
* Demonstrate proper mathematical notation within explanation of concepts.
* Formative assessments (Homework quizzes, quizzes, tests)
* Group discussions when faced with unfamiliar situations; students discuss appropriate strategies and situations.
* Students combine and apply their mathematical knowledge when solving summative Situational Problems.

**IB MYP LEARNER PROFILE**: Identify which profile attributes will be addressed in the course and how.

* Attributes: Communicators, Inquirers/Thinkers, Caring

How:

* Teaching focused on effective teamwork and collaboration
* Teaching through inquiry
* Teaching differentiated to meet the needs of all learners

**FORMATIVE & SUMMATIVE ASSESSMENT INCLUDING MYP ASSESSMENT:**

| **Term 1 (20% of School Course Grade)** | | |
| --- | --- | --- |
| *Competencies targeted* | *Evaluation methods* | *Timeline* |
| Competency 1: Solves a situational problem  (30% of term grade)  Competency 2: Uses mathematical reasoning  (70% of term grade) | May include but not limited to:  - Tests  - Quizzes  - Homework quizzes  - Situational Problem | Sept 1, 2022 – Nov 3, 2022 |
| *Communication to students and parents* | *Materials required* | |
| * Mozaik Parent Portal * Progress Report * Report Card * (communication on an as needed basis) | * Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations * Ruler, pencils, and eraser * Scientific calculator * Internet Access (Outside of the classroom: Home/Library) | |
| *IB MYP Criterion* | *Examples of assessment/feedback both formative and/or summative* | |
| A: Knowing and understanding  B: Investigating patterns  C: Communicating  D: Applying mathematics in real-life contexts | - Tests  - Quizzes  - Homework quizzes  - Situational Problem | |

| **Term 2 (20% of School Course Grade)** | | |
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| *Competencies targeted* | *Evaluation methods* | *Timeline* |
| Competency 1: Solves a situational problem  (30% of term grade)  Competency 2: Uses mathematical reasoning  (70% of term grade) | May include but not limited to:  - Tests  - Quizzes  - Homework Quizzes  - Situational Problem  - MIDYEAR EXAM | Nov 4, 2022-  Feb 3, 2023 |
| *Communication to students and parents* | *Materials required* | |
| * Mozaik Parent Portal * Progress Report (April) * Second Term Report Card * (communication on an as needed basis) | * Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations * Ruler, pencils, and eraser * Scientific calculator * Internet Access (Outside of the classroom: Home/Library) | |
| *IB MYP Criterion* | *Examples of assessment/feedback both formative and/or summative* | |
| A: Knowing and understanding  B: Investigating patterns  C: Communicating  D: Applying mathematics in real-life contexts | - Tests  - Quizzes  - Homework quizzes  - Situational Problem | |

| **Term 3 (60% of School Course Grade)** | | |
| --- | --- | --- |
| *Competencies targeted* | *Evaluation methods* | *Timeline* |
| Competency 1: Solves a situational problem  (30% of term grade)  Competency 2: Uses mathematical reasoning  (70% of term grade) | May include but not limited to:  - Tests  - Quizzes  - Homework Quizzes  - Situational Problem  - FINAL EXAM | Feb 4, 2023-  June 22, 2023 |
| *Communication to students and parents* | *Materials required* | |
| * Mozaik Parent Portal * Third term report card * (communication on an as needed basis) | * Notebook or lined paper, graph paper, binder for handouts and duo-tang for evaluations * Ruler, pencils, and eraser * Scientific calculator * Internet Access (Outside of the classroom: Home/Library) | |
| *IB MYP Criterion* | *Examples of assessment/feedback both formative and/or summative* | |
| A: Knowing and understanding  B: Investigating patterns  C: Communicating  D: Applying mathematics in real-life contexts | - Tests  - Quizzes  - Homework Quizzes  - Situational Problem | |

| **Additional Information/Specifications** |
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| **☐** This course does not have a final exam. The final course grade comes entirely from the school course grade.  **x** This course has a final exam administered by the English Montreal School Board. The final course grade is determined by taking 80% of the school course grade and 20% of the school board exam.  **☐** This course has a final exam administered by the *Ministère de l’Éducation et de l’Enseignement Supérieur* (MEES). The final course grade is determined by taking 80% of the school course grade and 20% of the MEES exam. Please note that the final course grade is subject to MEEs moderation. |
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